# Fire Weather Services Operating Plan for Southeast Ohio

National Weather Service:
Charleston, WV (RLX)

2010

This operating plan is a semi-permanent document, specifying Fire Weather services provided for Southeast Ohio by National Weather Service in Charleston, West Virginia. The plan incorporates procedures detailed in the Interagency Agreement for Meteorological Services.

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## I. INTRODUCTION

This Fire Weather Services Operating Plan serves as the official document governing the interaction and relationships between the National Weather Service (NWS), and the federal, state, and local natural resource and land management agencies or cooperators in West Virginia. These include the following agencies:

- NOAA National Weather Service
- USDA Forest Service
- OH Division of Forestry

The plan also identifies meteorological services to be provided by the NWS. Services provided by the NWS fall into two categories, basic and special services. Basic services are provided without cost and are processed directly between the user and the NWS office personnel. Examples of basic services include the Fire Weather Planning Forecast (FWF), numerical forecasts for NFDRS (FWM), spot forecasts, along with Fire Weather Watches and Red Flag Warnings. Spot forecasts are available upon request 24 hours a day throughout the year. Special services are provided on a reimbursable basis. Orders should be placed directly with the NWS Office. Special services could include teaching weather-related courses, or an on-site Incident Meteorologist (IMET). Please reference the Eastern Area Mobilization Guide and/or the National Mobilization Guide for details about these special services.

## II. SERVICE AREA AND ORGANIZATIONAL DIRECTORY

The Service Area covered by this Operating Plan is Southeast Ohio, which is served by the National Weather Service Weather Forecast Office in Charleston, WV (RLX)

### A. National Weather Service (NWS) Charleston, WV County Warning Area

The RLX forecast area covers the following counties/zones of Southeast Ohio:,

| County: | Zone Number: | County: | Zone Number: |
|---|---|---|---|
| Athens | OHZ075 | Morgan | OHZ067 |
| Gallia | OHZ086 | Perry | OHZ066 |
| Jackson | OHZ083 | Vinton | OHZ084 |
| Lawrence | OHZ087 | Washington | OHZ074 |
| Meigs | OHZ085 | | |


Charleston, West Virginia Forecast Area

B. NWS Charleston, WV Points of Contact:

Charleston, West Virginia Forecast Office (RLX)
Online: www.erh.noaa.gov/rlx/firewx.html
Phone: 304-746-0189 unlisted forecast line
304-401-0193 fax
Address: 400 Parkway Road
Charleston, West Virginia 25309
Fire Weather Program Leader (FWPL): Mark Pellerito (Mark.Pellerito@noaa.gov)
Assistant FWPL: Simone Lewis (Simone.Lewis@noaa.gov)
Meteorologist in Charge (MIC): Alan Rezek (Alan.Rezek@noaa.gov)

Primary Backup Office: NWS Pittsburgh (PBZ)
FWPL: Zaaron Allen (Zaaron.Allen@noaa.gov)
MIC: Vacant as of 3/19/2010
Phone: 716-565-0013, Fax: 716-565-9002

Secondary Backup Office: NWS Jackson, KY (JKL)
FWPL: Jon Pelton (Jonathan.Pelton@noaa.gov)
MIC: Shawn Harley(Shawn.Hurley@noaa.gov)
Phone: 606-666-8000, Fax: 606-666-4168

NWS Office that covers Southwest to South Central Ohio:
NWS Wilmington, OH (ILN)
FWPL: John J. Franks (John.J.Franks@noaa.gov)
MIC: Kenneth Haydu (Kenneth.Haydu@noaa.gov)
Phone: 937-383-0929, Fax: 937-383-0033

C. List of Participating Agencies

1. Agencies, Contacts, and Phone Numbers

Eastern Area Coordination Center: Ft. Snelling, Minnesota
Interagency Fire Weather Program Leader/Meteorologist - Stephen Marien (stephen_marien@nps.gov) 612-713-7300 / 612-713-7317 fax

Wayne National Forest:
Forest Fire Management Officer - Kevan Moore (kevanmoore@fs.fed.us)
740-753-0574 / 740-591-9013 cell
OH-OIC Dispatcher - Michele Stephens (mrstephens@fs.fed.us)
740-753-0571 / 740-624-2284 and Fax 740-753-0120

- Athens Ranger District – Michael Armendarez, DFMO (marmendarez@fs.fed.us) 740-753-0101 / 740-591-7191
- Marietta Unit - Tom Thompson 740-373-9055 / 373-8079 fax
- Ironton Ranger District – Jonathan Olsen, DFMO (jolsen@fs.fed.us) 740-534-6538 / 740-646-5213

Ohio Division of Forestry:
Program Manager - Michael Bowden (michael.bowden@dnr.state.oh.us) 614-265-1088

- Athens/Vinton Counties: Zaleski State Forest
  Tom Shuman - Manager 740-596-5781 (tom.shuman@dnr.state.oh.us)
- Jackson County: Scioto Trail State Forest
  Brian Kelly - Manager 740-663-2538 (brian.kelly@dnr.state.oh.us)
- Lawrence/Gallia/Jackson Counties: Southern District
  Robert Boyles - District Forester 740-774-1596 (bob.boyles@dnr.state.oh.us)
  or Nate Jester - Forest Manager Shawnee State Forest 740-858-6685 (nathan.jester@dnr.state.oh.us)
- Meigs/Morgan/Washington Counties: Hocking State Forest
  Dave Glass – Manager 614-212-3306 cell or 740-385-4402 office (david.glass@dnr.state.oh.us)
- Perry County: Blue Rock State Forest
  Dave Glass – Manager 614-212-3306 cell or 740-674-4035 office

*State forests in the Charleston, WV forecast area include: Dean, Richland Furnace, Hocking, Shade River, Zaleski, Gifford, and Perry.

2. Agency Area Maps

a. Ohio Divison of Forestry

Ohio State Forests and District Offices

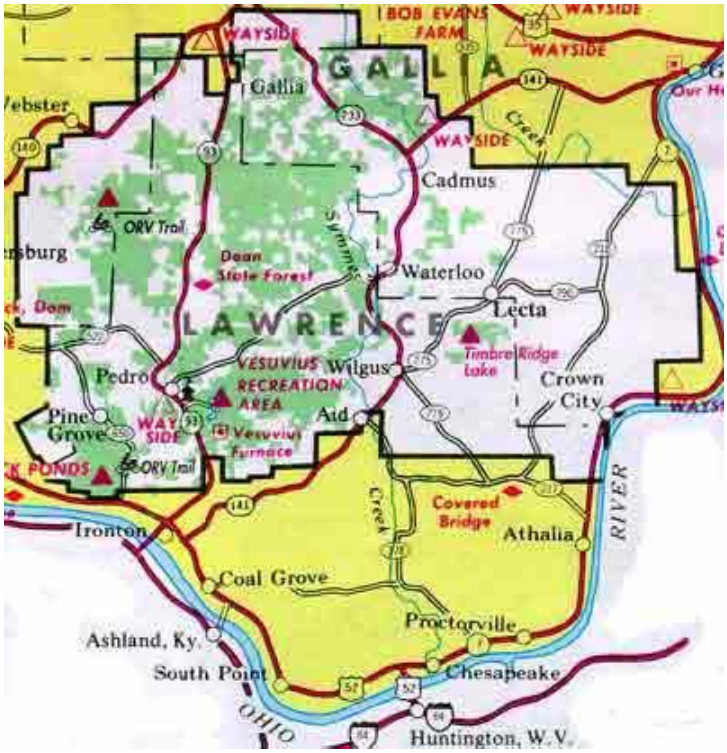

State forests in the NWS Charleston, WV forecast area include: Dean, Richland Furnace, Hocking, Shade River, Zaleski, Gifford, and Perry.

b. Wayne National Forest – Ohio (Images courtesy the Wayne National Forest)


Athens District:

Marietta Unit:


Ironton District:



## III. SERVICES PROVIDED BY THE NATIONAL WEATHER SERVICE

### A. Fire Weather Seasons

Wildfires can occur in Southeast Ohio any time of year. As a result, NWS Charleston issues the Fire Weather Planning Forecast year-round. However, there are two general peaks of fire activity (two fire seasons): March 1st – May 31st and October 1st – December 31st. They coincide roughly with the period before and up to full greening in the Spring, and the period after the first frosts in the Fall.

### B. Fire Weather Products

Routine fire weather products include the Fire Weather Planning Forecast (FWF) and National Fire Danger Rating System Fire Weather Matrix forecasts (FWM). Non-routine products include SPOT forecasts, Fire Weather Watches, and Red Flag Warnings.

1. Fire Weather Planning Forecast (FWF) – Issued year-round

   a. Issuance times – Twice daily, at 4:15 a.m. and 4:15 p.m. Updates may be issued at various times throughout the day to reflect significant changes or to note the issuance of a Fire Weather Watch or Red Flag Warning.

   b. How to retrieve the forecast

      FWF Forecasts are available through the Weather Information Management System (WIMS) and online on the NWS Charleston Fire Weather Webpage. For an example, see the most recently issued version of the FWF below:

      NWS Charleston FWF: http://www.srh.noaa.gov/data/RLX/FWFRLX

   c. Content/Format

      This FWF product is issued by county groupings based on climatology and land management areas. Morning issuances will include the next 3 weather periods in detail: today, tonight, and tomorrow; followed by an extended forecast that contains general conditions through the remainder of the next 7 days. For afternoon issuances, the more detailed portion of the forecast will include the next 4 weather periods.

      The Format of the Fire Weather Forecast is specified in National Weather Service Directive 10-401.

      The time of issuance is located in the header of the FWF, given in local time.

      A headline may be added, but is usually not included unless watches or warnings have been posted, or near-critical conditions are expected.

Example:
**...RED FLAG WARNING TODAY IN SOUTHEAST OHIO FOR LOW HUMIDITY AND STRONG WIND...**

.DISCUSSION...

The discussion is a brief synopsis of current conditions and what can be expect over the next five days. It will include the mention of major weather features and any changes anticipated over the forecast area.

CLOUD COVER

The prevailing cloud cover across the area, given as MCLOUDY, CLOUDY, PCLDY, MCLEAR, or CLEAR.

PRECIP CHC (%)

This is the chance of precipitation ranging from 0 to 100 percent. This value indicates the percent probability that any one location will receive measurable rain of 0.01 inches or greater.

| | | |
|---|---|---|
| **0-14%** | **=** | None, unless flurries, sprinkles, or drizzle (non-measurable precipitation) |
| **15-24%** | **=** | Slight chance or isolated |
| **25-54%** | **=** | Chance, widely scattered, or scattered |
| **55-74%** | **=** | Likely or numerous |
| **75-100%** | **=** | Definite |

PRECIP TYPE

There are various precipitation types that may be included. If no precipitation is forecast, NONE will be the precipitation type. Other examples include SNOWSHOWERS, SHOWERS, FLURRIES, SPRINKLES, RAIN, and TSTMS.

PRECIP DURATION

Approximate duration of forecast precipitation in hours.

MAX/MIN TEMP

Maximum and minimum temperatures are forecast in degrees Fahrenheit. Maximum temperatures will be given during the daytime period, and minimum temperatures for the overnight periods.

HUMIDITY (%) or "MAX/MIN RH"

Relative humidity is the ratio, in percent, of the amount of moisture in the air compared to the amount the air could hold if it were fully saturated (100%). FWF forecast indicates the minimum humidity expected for the day and maximum humidity level at night.

AM WIND (MPH)or "EARLY"

This is the morning wind direction and speed in miles per hour. Direction is given in the 8 cardinal directions, the direction from which the wind is blowing (N, NE, E, SE…). Sustained speed is representative of the 20 foot level, with 10-minute averaging (like RAWS sites).

PM WIND (MPH)or "LATE"

The pm wind contains the same data as am wind, but for the afternoon and overnight periods only.

PRECIP AMOUNT

Precipitation amount is given in inches and is the average amount expected when precipitation is forecast. When the chance of precipitation is less than 15%, a value of 0 will be given.

PRECIP DURATION

The duration of precipitation will be given in hours beginning at 0 if no precipitation is forecast.

PRECIP BEGIN

The forecast beginning time of precipitation, given in local time in whole hours.

PRECIP END

This is the forecast end time of precipitation.

HAINES INDEX

Haines Index is the sum of a stability term and a moisture term. The sum provides an indication of the potential for the rate of spread (ROS) of a fire on a given day. A Haines Index of 2-3 = very low, 4 = low, 5= moderate, and 6= high. In Southeast Ohio, the Haines Index is derived using temperatures and dew point values at 850 millibars (mb) and 700 mb - or roughly 5,000 and 10,000 feet above ground level under a standard atmosphere.

| **Stability Term** ($T_{850mb} - T_{700mb}$) | **Moisture Term** ($Td_{850mb} - Td_{700mb}$) |
|---|---|
| **1**...5 °C or less | **1**...5 °C or less |
| **2**...6 to 10 °C | **2**...6 to 12 °C |
| **3**...11 °C or greater | **3**...13 °C or greater |

Haines Index is calculated by adding the Stability Term to the Moisture Term using the table above.

LAL

LAL (Lightning Activity Level) describes the intensity or frequency of thunderstorms if forecast, otherwise a value of 1 is given.

**Lightning Activity Level Guide**

| LAL | Coverage |
|---|---|
| 1 | No T-storms |
| 2 | Isolated T-storms (1-14% coverage) |
| 3 | Widely Scattered T-Storms (15-24% coverage) |
| 4 | Scattered T-storms (25-54% coverage) |
| 5 | Numerous (55+% coverage) |
| 6 | >=15% coverage...little or no rain (Dry Thunderstorms) |

MIXING HGT (FT-AGL)

Mixing height is forecast in feet above ground level. The mixing height is the depth of the unstable air in the boundary layer and is used for forecasting smoke or pollutant trajectories.

TRANSPORT WIND (KTS)

Transport wind and is defined as the average wind speed in all directions of all winds within the layer bounded by the surface and the mixing height. This value provides information about the horizontal dispersion (location and distance downwind from the source) or suspended particles from prescribed fires.

VENT RATE (FT-KTS)

The ventilation rate, forecast for daytime periods, is the product of the transport wind speed and the mixing height. The resulting value is used for forecasting smoke behavior and trajectories. The ventilation rate gives the potential for the atmosphere to disperse smoke.

DISPERSION

Dispersion indicates the forecast smoke dispersion category for the overnight periods only. (4 knots = 4.6 mph; 8 knots = 9.2 mph; 12 knots = 13.8 mph)

| Dispersion Values | | | | |
|---|---|---|---|---|
| 1 | = | Very Poor | = | $\leq 4$ knots |
| 2 | = | Poor | = | $4 > x \leq 8$ knots |
| 3 | = | Good | = | $8 > x \leq 12$ knots |
| 4 | = | Excellent | = | $> 12$ knots |

.EXTENDED...
This portion of the forecast will contain general temperatures, sky conditions, and precipitation expected through the remainder of the 7 day forecast period.

.OUTLOOK 8 TO 14 DAYS...
The extended outlook is taken from a daily forecast produced by the Climate Prediction Center (CPC). It includes temperature and precipitation trends compared to seasonal normal values for the time periods. ABOVE NORMAL, NEAR NORMAL, OR BELOW NORMAL will be given. For more information on this and other extended outlooks, please see the CPC website at www.cpc.noaa.gov.

2. National Fire Danger Rating System Forecasts (NFDRS-FWM)

Our FWM (Fire Weather Matrix) is a small part of the National Fire Danger Rating System (NFDRS). The NFDRS is a complex model of fuel and weather parameters processed daily.

NFDRS forecasts will be issued for any predetermined site from which an NFDRS observation is received, provided the observation is received on time, is complete, and is deemed accurate. The natural resource agencies will determine which observation sites (normally RAWS sites) will be NFDRS sites. Initiation of NFDRS forecasts for a new site will be coordinated with the NWS, and the agency requesting new NFDRS service will provide the NWS with information about the site location. The NWS will notify the owner agency when bad data is received from a RAWS station.

The inputs include an 18Z (1 pm EST / 2 pm EDT) observation by the fire managers, set parameters about fuel type, and the forecast, FWM. After 21Z (4 pm EST / 5 pm EDT) daily, fire managers receive numeric outputs that suggest the severity of fire danger over a given area.

a. Procedures for Land Management Agencies

The land management agencies are responsible for taking, quality controlling, transmitting, and archiving the NFDRS observations. Observations must be received at the NWS in a timely manner. Forecasts will only be prepared for predetermined sites, and usually only from those site for which an observation has been received. The deadline for the land management agency for transmitting the observation is 1900 GMT (2 pm EST/3 pm EDT). The NWS will prepare and transmit the NFDRS forecasts no later than 1945 GMT (2:45 pm EST/3:45 pm EDT). Although the data cutoff time for ingest into the NFDRS software is 7 pm, preliminary calculations based on the forecast are used by the land managers to make staffing decisions at shift briefing time (4 pm).

b. NFDRS-FWM Forecast Issuance times and locations

NFDRS forecasts are produced by the NWS no later than 1945 GMT (2:45 pm EST/3:45 pm EDT). NWS Charleston also issues a preliminary version around 1830Z (1:30 pm EST / 2:30 pm EDT) daily, to aid with land agency staffing decisions.

NWS Charleston produces this coded forecast for 11 sites in its county warning area, including these two in Southeast Ohio:

| RAWS name: | Station ID: | County: | Elev. | Lat: | Lon: |
|---|---|---|---|---|---|
| Dean | 338401 | Lawrence | 923 | 38:42:00 | -83:41:00 |
| Zaleski | 338403 | Vinton | 731 | 39:16:31 | -82.23:00 |

Dean RAWS is owned by Wayne National Forest, while Zaleski RAWS is owned by Ohio Division of Forestry. Additional sites may be added upon user request to the NWS Charleston Fire Weather Program Leader.

c. Content

For an example, click the link to the latest version of NFDRS-FWM forecast:
NWS Charleston FWF: http://www.srh.noaa.gov/data/RLX/FWMRLX

Decoding the Content of the NFDRS-FWM Forecast (with example):

**FCST, 464203,030127,13,2,17,92,1,1,NW,10,,18,10,98,56,1,0,N**
**FCST, Station, Date, 13, Wx, T, RH, L1, L2, WD, WS, , TM, TN, HM, HN, P1, P2, N**

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**Wx –** state of weather at 18Z (1 pm EST / 2 pm EDT) tomorrow. State of the weather is given as a value 0 through 9.

| | | |
|---|---|---|
| **0** | = | Clear sky |
| **1** | = | Scattered clouds |
| **2** | = | Broken clouds |
| **3** | = | Cloudy |
| **4** | = | Fog |

| | | |
|---|---|---|
| **5** | = | Drizzle |
| **6** | = | Rain |
| **7** | = | Snow/sleet |
| **8** | = | Showers |
| **9** | = | Thunderstorms |

**T –** temperature at 18Z (1 pm EST / 2 pm EDT) tomorrow (˚F)
**RH –** relative humidity at 18Z (1 pm EST / 2 pm EDT) tomorrow (%)
**L1 –** lightning activity level from 19Z (2 pm EST / 3 pm EDT) today to 04Z (11 pm EST / midnight EDT) tonight
**L2** – lightning activity level for 24 hours, from 04Z (11 pm EST / midnight EDT) tonight until 04Z (11 pm EST / midnight EDT) tomorrow night

**Lightning Activity Level Guide**

| LAL | Coverage |
|---|---|
| 1 | No T-storms |
| 2 | Isolated T-storms (1-14% coverage) |
| 3 | Widely Scattered T-Storms (15-24% coverage) |
| 4 | Scattered T-storms (25-54% coverage) |
| 5 | Numerous (55+% coverage) |
| 6 | >=15% coverage...little or no rain |

**WD –** wind direction at 18Z (1 pm EST / 2 pm EDT) tomorrow, using a 16-point compass (N, NNE, NE…)

**WS –** wind speed at 18Z (1 pm EST / 2 pm EDT) tomorrow (mph)

**TM –** maximum temperature from 18Z (1 pm EST / 2 pm EDT) today until 18Z (1 pm EST / 2 pm EDT) tomorrow (˚F)
**TN –** minimum temperature from 18Z (1 pm EST / 2 pm EDT) today to 18Z (1 pm EST / 2 pm EDT) tomorrow (˚F)

**HM –** maximum humidity from 18Z (1 pm EST / 2 pm EDT) today to 18Z (1 pm EST / 2 pm EDT) tomorrow (%)
**HN –** minimum humidity from 18Z (1 pm EST / 2 pm EDT) today to 18Z (1 pm EST / 2 pm EDT) tomorrow (%)

**P1 –** hours of precipitation from 18Z (1 pm EST / 2 pm EDT) today until 10Z (500 am EST / 6 am EDT) tomorrow
**P2 –** hours of precipitation from 10Z (5 am EST / 6 am EDT) tomorrow until 18Z (1 pm EST / 2 pm EDT) tomorrow

**WF –** wet flag is used to indicate if fuels will be wet at 18Z tomorrow (1 pm EST / 2 pm EDT), and is given as Y or N. If Y is used, then all indices will be forced to zero. N is most common.

d. WIMS ID contact

All fire weather stations have been assigned numbers to be used as the identification number when entering into the Weather Information Management System (WIMS). If a new station is established, or a present station is moved, a new identification number should be requested from the GACC Meteorologists. Also, please notify your local NWS Fire Weather Program Leader of this change.

3. Site-specific Wildland Fire Forecasts (SPOT forecasts)

SPOT forecasts are issued when requested by Interagency Wildland Fire Agencies for wildland fires or planned burn operations, or other specialized forest management activities, and are available 24 hours a day. In the event of an emergency which threatens life and/or property, SPOT forecasts can also be provided to any federal, state, or local agency. SPOT forecasts differ from our routine fire weather forecasts by incorporating greater detail in timing, higher resolution of terrain influences, as well as other small-scale weather influences impacting the site. They should be requested within 18 hours of a prescribed burn. Beyond 18 hours, the Fire Weather Planning Forecast (FWF) should be utilized.

a. Criteria

Before a SPOT forecast is issued for a particular site, detailed information about the area and who is making the request must be given. Some of these site details include elevation, latitude, longitude, and aspect. The more accurate the data received about the site, the more accurate the resulting forecast will be. Current weather information from the site, including temperature, wind speed, and relative humidity will increase the accuracy of the SPOT forecast. The requesting agency, project name, phone number, and effective time for the requested forecast must also be given.

b. Content

In general, the content includes sky conditions, weather, temperature, relative humidity, and wind speed. Additional specific fire weather parameters are available upon request.

c. Procedures

SPOT requests should be made using the web based SPOT forecast request form for NWS Charleston: http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=rlx

If internet access is not possible, SPOT forecasts may be requested via fax or phone. See Points of Contact section near beginning of this plan for the numbers. When faxing a request, the Fire Weather Special Forecast Request Form, WS Form D-1, should be used.
Link for WD Form D-1: http://nimbo.wrh.noaa.gov/pih/firewx/D1-V2005.pdf

While there is no dedicated fire weather forecaster, NWS Charleston will give a high priority to SPOT forecasts in the absence of weather phenomena that pose a threat to life and property. To ensure that the SPOT request is handled properly and appropriately, users should adhere to the following guidelines:

- A phone call to NWS Charleston is usually not needed, but can greatly expedite the process and may help clear up questions from forecasters.
- Allow adequate time for the forecaster to prepare the forecast. This will normally be about 30 minutes.
- Provide as much on-site or near-site weather information as possible. At a minimum, the user should provide at least one observation within the hour of the request. This observation should include the following: site location, elevation, time, wind direction speed and level (eye or 20 ft), dry and wet bulb temperatures, and remarks about the state of the weather (especially if affecting fire behavior). If possible, especially for prescribed burns, include some observations from the previous day(s) that might give the forecaster an indication of daily trends.
- Specify the time period for which the forecast is needed. Temporally, NWS Charleston defaults to offering forecast parameters in 3-hour increments. If a SPOT forecast is needed with different temporal requirements, coordinate with NWS Charleston (at minimum, include in the remarks section of the SPOT request, but it would expedite the process by calling the NWS Charleston directly).
- Provide a contact point name and phone number for the forecaster to call back, if necessary (Also, a fax number for returning completed forecasts if web based form is not used).

The SPOT website will auto-update upon completion of the SPOT forecast by the NWS Office (or if via fax, the NWS will fax completed forecast). The forecast can be accessed simply by clicking on the incident/fire name of the SPOT request, once the status indicates "complete."

Contact NWS Charleston for a SPOT update if forecast conditions appear unrepresentative of the actual weather conditions. When possible, provide feedback during or shortly after an event. This will assist forecasters in subsequent forecasts.

Land agencies can test out the online request page. For a Test SPOT request, please contact NWS Charleston to tell one of the forecasters that you are doing so, and include "Test" within the name of the incident on the SPOT request form.

Example of SPOT forecast from NWS Charleston: Deep Cut Fire 3/10/2009

4. Fire Weather Watch and Red Flag Warning Program

The Fire Weather Watches and Red Flag Warnings are issued to advise of rare conditions that could result in extensive wildfire occurrence or extreme fire behavior.

A **Fire Weather Watch** is issued 12 to 72 hours in advance of the onset of possible warning conditions.

A **Red Flag Warning** is issued within 12 hours of the event (or onset of warning conditions).

a. Criteria

The parameters used to define a watch or warning includes relative humidity, wind speed, and 10-hr fuel stick moisture. The NWS will focus on mainly the weather-related portion of the criteria, while the fire product user agencies have the primary responsibility of tracking fuel moisture. Coordination between the fire product user agencies and the NWS is key, particularly dealing with Fuel Stick Moisture (the fire product user agencies are the experts).

NWS Charleston Red Flag Criteria:
All of the following must be expected to occur, and persist at least 2 hours:
* **Relative Humidity** less than or equal to 25%
* 20-foot 10-minute averaged **Wind Speed** greater than or equal to 15 mph
* **10-hour Fuel Stick Moisture** less than or equal to 8%

NWS Charleston will call the Eastern Area Coordination Center (Eastern Area GACC Meteorologist) after issuance of a Fire Weather Watch or Red Flag Warning. A Fire Weather Watch will remain in effect until either (1) it is determined that Red Flag conditions will not develop, or that (2) the Watch is upgraded to a Red Flag Warning.

A Red Flag Warning will remain in effect until either (1) Red Flag conditions come to an end or (2) Red Flag conditions fail to develop as forecast. At such time, the warning will be canceled.

During periods of extended drought or when wildland fires are occurring, modifications to Fire Weather Watch/Red Flag Warning criteria may be needed. Any proposed modifications will require coordination between the NWS Charleston and associated land agencies.

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b. Content

The format for Red Flag Warnings and Fire Weather Watches is specified in National Weather Service Directive 10-401. The header will state whether it is a Fire Weather Watch or Red Flag Warning. This narrative product will be comprised of a headline followed by a brief statement with more detail as to where, when, and why the product was issued.

Links to the latest issuance of a Red Flag Warning or Fire Weather Watch from NWS Charleston: http://www.srh.noaa.gov/data/RLX/RFWRLX
(Note: If no Watch/Warning has been issued recently, it may show up as empty)

C. Special Services

Special services include teaching weather-related courses, an on-site Incident Meteorologist (IMET), or briefings/coordination calls.

When land management agencies wish for a fire weather forecaster to attend and teach a course, the request should be made well in advance and no later than 2 to 3 weeks ahead of time. Requests for training assistance should be made through the Fire Weather Program Leader (FWPL) or Meteorologist-In-Charge (MIC) of NWS Charleston. A one-day trip will not incur any costs to the requesting agency. However, with an overnight stay, travel expenses should be paid for by the requesting agency.

On-site forecast service support is available for wildfires, prescribed burns, and other non-wildfire high-impact incidents. This includes the dispatch of an Incident Meteorologist (IMET) and deployment of related service equipment such as the Atmospheric Theodolite Meteorological Unit (ATMU), the All Hazards Meteorological Response System (AMRS), and the Fire Remote Automated Weather Stations (Fire RAWS). The IMET, ATMU, AMRS, and the Fire RAWS are considered national fire fighting resources. Please reference the Eastern Area Mobilization Guide and/or the National Mobilization Guide for details about IMET dispatches and ATMU/AMRS/Fire RAWS deployments for wildland fire suppression or other emergency incident operations.

NWS meteorologists may also be asked to assist in other non-routine services, such as briefings or coordination calls, during periods of high fire danger or fire occurrence. The FWPL and MIC will ensure that the land agency needs are met with little expense to either agency.

D. Fire Danger Statements and Blow-Up Alerts

When fire danger or fire occurrence is high, and coupled with near-critical weather conditions, agencies may request that NWS issue a Fire Danger Statement or Blowup Alert. These statements should be rare, and issued in coordination with the requesting agency. A Special Weather Statement (SPS) will be used for these issuances. The SPS will be broadcast on NOAA Weather Radio All-Hazards.

Example:
…Enhanced Fire Danger Today…

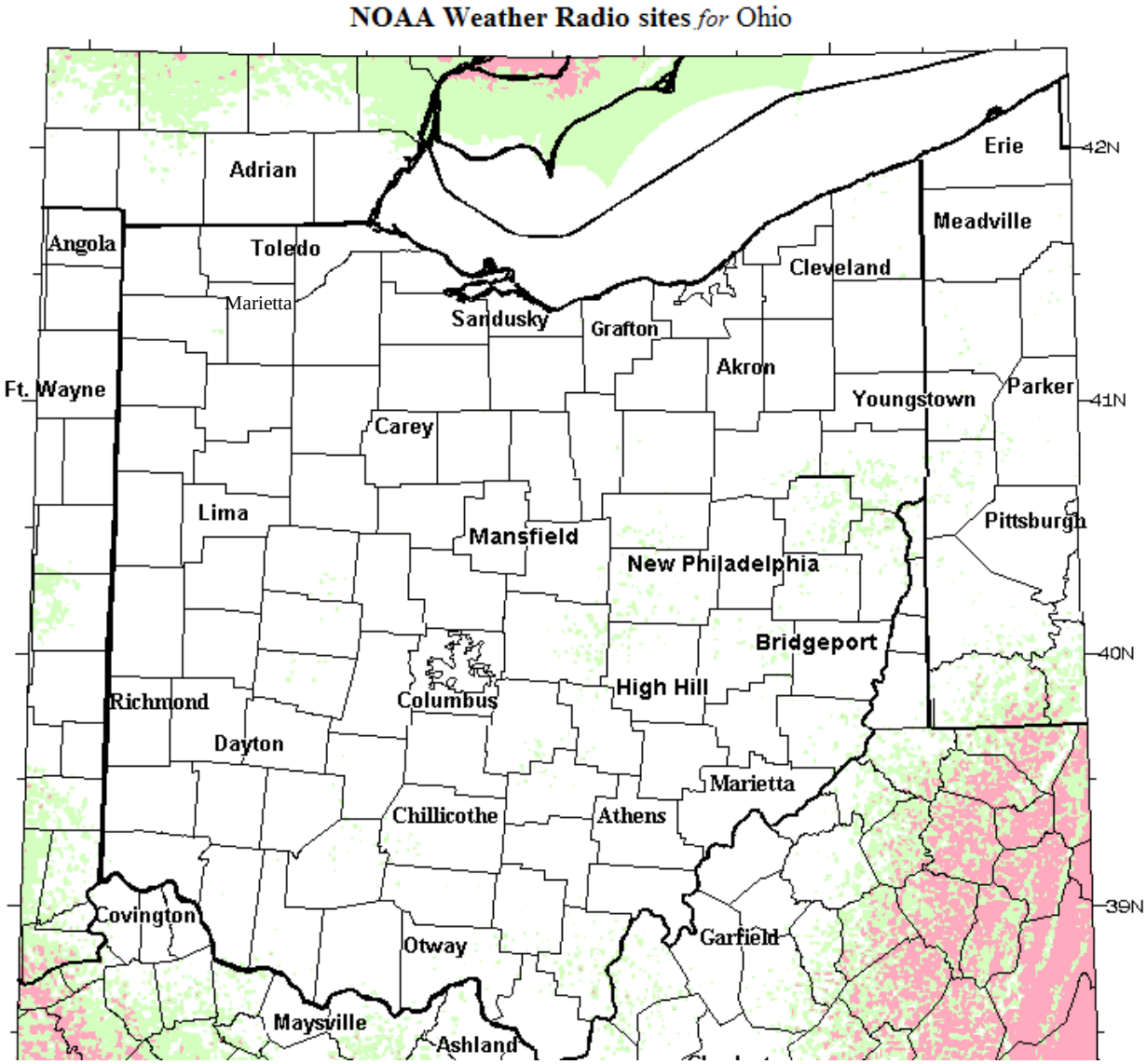
Here is a Wildfire Danger Statement issued in coordination with [Agency] in [City, State].

For [Day Month Date Year] the wildfire danger is [High, Very High, or Extreme] for the [Geographic area of danger] of Southeast Ohio.

Open burning of any type is considered extremely dangerous at this time. Be very careful of heat and sparks while operating any equipment or smoking in wildland areas.

E. NOAA Weather Radio All-Hazards Locations

For more information about frequencies and service areas please visit http://www.nws.noaa.gov/nwr/allhazard.htm, or get the same information from a clickable version of the map below at http://www.nws.noaa.gov/nwr/states/ohio.html.



## IV. JOINT RESPONSIBILITIES

Service boundaries and fire weather forecast areas and groupings may be negotiated to meet customer and forecaster need.

## V. BACKUP PROCEDURES

Though rare, from time to time NWS offices need to go into backup mode. This is usually during a period of software or hardware upgrading. If forecasters at NWS Charleston are unable to be reached, try contacting the Primary Backup Office (and if no contact there either, the Secondary Backup Office). Primary and Secondary Backup Offices for NWS Charleston (and contact information) are located in the NWS Charleston Points of Contact Section near the front of this Fire Weather Services Operating Plan.

## VI. EFFECTIVE DATES ON THE FIRE WEATHER SERVICES OPERATING PLAN

This Agreement shall be effective until the issuance of the next version of the Fire Weather Services Operating Plan (FWSOP). The FWSOP will be updated as needed, and reviewed at least on an annual basis. The last update on this plan occurred March 2010.

## VII. NATIONAL INTERAGENCY AGREEMENT

Interagency Agreement for Meteorological Services Among the Bureau of Land Management, Bureau of Indian Affairs, U.S. Fish and Wildlife Service, the National Park Service of the U. S. Department of the Interior; the Forest Service of the U.S. Dept of Agriculture; and the National Weather Service of the U. S. Dept. of Commerce

The latest Inter-Agency Agreement for Meteorological Services can be found at http://radar.srh.noaa.gov/fire/docs/2008_National_Agreement.pdf

## VIII. SIGNATORY PAGE

The following signatories have agreed to the terms and conditions of this Fire Weather Services Operating Plan for Southeast Ohio, which will be revised as needed, but on at least an annual basis. Actual signatures are maintained on file.

*Mark Pellerito 3/19/2010*
Mark Pellerito
Fire Weather Program Leader
National Weather Service – Charleston, WV (RLX)

*Stephen Marien 3/19/2010*
Stephen Marien
Predictive Services Program Manager
Eastern Area Coordination Center

*Kevan Moore 3/29/2010*
Kevan Moore
Fire Management Officer
Wayne National Forest

*Michael Bowden 3/29/2010*
Michael Bowden
Program Administrator
Ohio Division of Forestry